



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Dillon Cole Flournoy	Project Number J0809
Project Title Solar Disinfection of Water	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My project was to determine whether or not there would be fewer bacterial colonies in contaminated water after being exposed to sunlight. I wanted to find an easy and inexpensive way for people in developing countries to disinfect their water.</p> <p>Methods/Materials I collected nine samples from three different water sources. Samples of the contaminated water were spread on auger plates and put in an incubator for thirty-six hours. The contaminated water was then exposed to the sun for five hours. After sun exposure, more samples were spread on new auger plates and put in an incubator for thirty-six hours. Bacterial colonies on the auger plates, from before and after sun exposure, were then counted and compared.</p> <p>Results After counting and comparing the bacterial colonies on the auger plates from before and after sun exposure, I found that there was 45-50% fewer bacterial colonies in the contaminated water that had been exposed to the sun.</p> <p>Conclusions/Discussion After researching my topic, I thought that there would be at least a 90% kill of bacteria in the contaminated water. I may have had a better outcome if I had left the contaminated water in the sun longer, had a less cloudy day or extracted all of the air from the bottles. I think this experiment will work with some changes and will provide an easy and inexpensive way for people to disinfect contaminated water.</p>	
Summary Statement My project was to disinfect contaminated water by exposing the water to the sun's U.V. rays.	
Help Received Dr. Catania and the Modoc Veterinary Center for the use of their incubator. My mother for driving me around so that I could collect supplies, deliver samples of water, and for taking me to the Veterinary Center.	